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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,047	02/21/2002	Katsuya Sakayori	DAIN:668	9304

6160 7590 11/29/2004

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EXAMINER	
BISSETT, MELANIE D	

ART UNIT	PAPER NUMBER
1711	

DATE MAILED: 11/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/069,047	SAKAYORI ET AL.
	Examiner	Art Unit
	Melanie D. Bissett	1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 October 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *42-63* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *42-63* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. The rejections based on 35 USC 102 have been maintained for the reasons cited below.

Claim Rejections - 35 USC § 102

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 42-63 are rejected under 35 U.S.C. 102(b) as being anticipated by Nippon Steel Chemical. Note that the examiner refers to the English language equivalent, Shimose et al. (US 6,203,918 B1), for the purposes of this Office action. Both references have been provided to the applicant.

4. From a prior Office action:

> Nippon Steel teaches laminates for use in hard disk drive components having a stainless steel substrate, insulative polyimide layers thereon, and a final electrical conductor layer covering the polyimide layers (abstract). Insulative layers comprising two or three layers of polyimides are preferred (col. 3 lines 41-44), where each of the polyimide layers are etchable by hydrazine at rates of at least 0.5 μm (col. 3 lines 55-67). Preferred conductive layers to be applied to the polyimide layers include copper or copper alloy foils (col. 5 lines 34-49). The examples show insulative layer structures, where three layers of polyimide are used. Example 1 shows an etching rate ratio of 1.09:1 (A:C), while example 6 shows an etching rate ratio of 1.19:1 (B:F). The examples show adhesion strengths above 300 g/cm for adhesion of the outer polyimide layers to either the stainless steel or copper layers. Furthermore, example 3 shows a thickness ratio of the core layer to outer layers of 4:1 (8 μm:2 μm). The reference teaches etching methods for forming electronic circuit or hard disk drive electronic components, where photoetching and wet etching are both used (col. 6 lines 49-67). Because no inorganic nitride or inorganic fluoride layers are noted, it is the examiner's position that the reference also teaches the absence of such layers.

Response to Arguments

5. In response to the declaration and the applicant's arguments that the reference does not teach the applicant's claimed etching rate ratios, it is the examiner's position that the showing is not sufficient to overcome the reference. The applicant has attempted to reproduce the synthetic examples of the reference to show that the reference is inoperable. In such cases, a preponderance of the evidence must be shown to support the position that the reference is inoperable. See MPEP 716.07. The MPEP also states that

> "since in a patent it is presumed that a process if used by one skilled in the art will produce the product or result described therein, such presumption is not overcome by a mere showing that it is possible to operate within the disclosure without obtaining the alleged product."

The applicant has attempted to perform synthesis of the insulative materials as taught by Nippon Steel. However, it does not appear that the polymers of the Nippon Steel invention were accurately reproduced. First, the examples were performed on a 1/10 scale, but the applicants have not shown that such a scale would accurately reproduce the reference's examples. The applicants were not able to follow the reference's guidelines, since the materials of the applicant's experiments formed an unprocessible viscous composition. To remedy this occurrence, the applicants doubled the amount of solvent in the reaction. The fact that this step was necessary supports the position that the polymers of Nippon Steel's teaching were not accurately reproduced. The applicant has provided no evidence to show that the polymers formed by the experiments would have the same molecular weight or solubility as those materials formed in the reference.

6. Furthermore, it is noted that the applicants refer to Synthetic Examples 1 and 6 (p. 6 of declaration) as having high or low etching rates, where no reaction conditions

are given for the experiments. In fact, the applicants admit that these experiments were not performed since the reactants were not available (p. 2 of declaration). The applicant relies on the results of Synthetic Examples 1 and 6 in the applicant's response (p. 10). The results from these experiments cannot be used to support the applicant's position, since the applicant has not shown how these experiments have been reproduced from the reference. What led to the numerical results for Synthetic Examples 1 and 6?

7. When evaluating the etching rates for the materials, the applicants have not specified the thickness of the starting layers. Also, the applicants have indicated stirring in the hydrazine solution, where this step was not specified in the reference.

8. Lastly, it is unclear to the examiner how the etching rate ranges specified on p. 6 of the declaration were evaluated. The reference shows an etching rate but not a range. Were several samples of the polymer evaluated? What was the error range for these experiments? Also, how were the ratios calculated? What values were used for precursor F?

9. Without a preponderance of the evidence to support the applicant's position, it is the examiner's position that the reference has not been shown to be inoperable, and the results cited in the reference are presumed to be accurate.

10. Furthermore, the reference teaches a preference for polyimides having etching rates of 0.5 μm/min or more (col. 3 lines 64-67), where the applicant has indicated etching rate values from the examples of 0.06-0.5 μm/min. The applicant's findings contradict the preferred embodiment of the patented invention.

11. In response to the applicant's arguments that the reference is silent regarding control of the ratio of etching rate, it is noted that the reference anticipates the claimed ratios. Variation is not needed. In response to the applicant's arguments that the reference does not teach avoiding an uneven etching shape, it is noted that this is not required by the claims. The reference teaches the claimed ratio and thus anticipates the claims.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie D. Bissett whose telephone number is (571) 272-1068. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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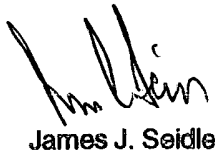

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